

Managing collaborative supply chains through the systemic approach: A state of art

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Abstract

Managing inter-organizational relationships in a supply chain has become a genuine factor of competitive advantage in numerous sectors. For virtual enterprises adopting a systemic approach, the key is the pursuit of real integration between the customer and its suppliers, aiming to achieve the market-imposed objectives of reducing development lead times and enhancing logistical responsiveness to customer demand.

Our theoretical study uses a state of art on supply chain management through collaborative practices will elucidate the social dimensions considered by actors on a strategic level, as well as the managerial complexities to which organizations are subjected in order to introduce relational and collaborative practices between the supply chain actors throughout the systemic approach.

Keywords: Supply chains; systemic approach; collaboration; relational integration; complexity.

JEL Classification : F02, F23, M16, O19

Paper type: Theoretical Research

1. Introduction

Constituting a fundamental part of economic activity in many respects, the Supply Chain Management (SCM) has established itself over the last thirty years as a sector of crucial importance that crystallizes the attention of researchers, in management sciences. The increasing number of publications from year to year demonstrates the growing interest of the scientific community in supply chain management (SCM), which is at the crossroads of all sectors of economic activity. The context in which relationships between partners develop is one of the factors that have most attracted the attention of researchers who, like Ganesan (1993) have concluded on the importance of this factor because it is the one that allows us to understand the recurrence and the longevity of the exchanges, the degree of collaborative practices between the actors and, therefore, the greater or lesser proximity that unites them. Given the intensity and multiplicity of the links and exchanges that unite organizations among themselves, the researchers have devoted a great deal of work to understanding the holders and outcomes of these links, as well as their typologies and consequences. Thus, because of the importance of the links that unite the partners of the SCM and the relationship that follows, many authors have looked at different dimensions and deployments of the relationship of relational integration, using relatively different but close concepts such as collaboration or collaborative relationship (Holweg et al., 2005), partnership (Lambert et al. 1996), cooperation (Mentzer and al., 2001), or even alliance in some limited cases. (Simchi-Levi et al., 1999).

Regarding the systemic approach, the keyword is the search for real integration between the customer and its suppliers, to the market-imposed goals of reducing development times and logistical response to customer demand For Fabbe-costes, Livolsi, and Sépari, 2018, Supply Chain concepts shake up the traditional organizational silos of most companies and bring a new vision: transversality, globality, complexity, and flow: in short, it is a systemic approach to organizations. For example, in the area of the Supply Chain, collaborative practices derived from social exchanges are often mentioned to accommodate the so-called traditional management mode. The management of supply chains through inter-enterprise collaboration applies when two or more partners in the chain engage, in a regular and structured manner, in an exchange of physical and information flows, intending to ensure the best possible optimization of the logistics process in its entirety, from the actor who is located at the top to the beneficiary who is at the bottom. (le client). This exchange of flows gives the supply chain real and effective consistency while enabling the actors involved in the collaboration to their respective goals and performance. It is therefore clear that we cannot talk about collaboration without its exchanges. The systemic approach, based on global optimization, has been shown to perform significantly better. Nevertheless, it is not widely expanded, since the implementation of an efficient solution requires a suitable scheme. It is also clear that the quality of collaboration is largely dependent on the intensity and quality of the exchanges. It is these exchanges that, while giving the collaboration a real consistency, enable it to be effective and to the objectives for which it was implemented. However, as Paché (2003) points out, some authors remain more discreet about the idea that collaborative relationships can be easily generalized to all aspects of inter-agency relationships, including some related to SCM. Thus, many are the authors who, like Granovetter (1985) or Gulati, 1995 will engage in the analysis and conceptualization of how social dimensions intervene in the establishment and regulation of complex exchanges between partners, thus promoting the emergence of the theory of social exchange or its corollary, the notion of social embedding, both ambition to highlight the fact that the social environment cannot be escaped during any transaction and that the individuals involved in a transaction rely, in different ways, on different social aspects to regulate their exchange.

Moreover, Tyndall et al. (1998)'s position on this issue is worth emphasizing, given that these authors believe that the relationships that bind together, in the context of the Supply Chain, are so complex that these approaches may be inoperable, especially when faced with so-called procedural interdependence. In this case, Tyndall et al. (1998) suggest a distinction between four forms of relationships: commercial transactions; cooperation; coordination; and collaboration. For their part, Paché and Paraponaris (2006) opt for a network approach that corresponds to a current of thought that has experienced a significant boost in interrelationships. organizational, in general, and in particular concerning the SCM, as well as when it is perceived as a new configuration oscillating between the market and the hierarchy, only when its organizational modalities are observed. Indeed, many organizational changes have emerged in favour of this new era. Tarondeau and Wright (1995); Louart (1996); Allouche and Huault (1998), among others, have reviewed the main aspects in the past, which they summarized as follows: focusing on the client and revising the management arrangements in this regard; process approach called transversality; networking between companies; flexibility; coordination; knowledge management; adoption of ICTs and virtual operating modalities. The main contribution of this research article is the proposal of a systemic approach to SCM, where takes advantage of the benefits derived from collaboration practices.

2. The supply chain: A complex system

Management of relationships between a network of partners in a supply chain has become a real competitive advantage in many sectors (Dyer, 2000). For virtual developing a process-based approach, also called a cross-cutting, /systemic approach, the key word is the search for real integration between the customer and its suppliers, to the market-imposed goals of reducing development times and logistical response to customer demand.

The SCM coordinates, through multiple collaborative networks and management devices and tools, the various cross-cutting organizational processes that contribute to the overall value creation of the Supply Chain (customer relationship management, customer service, demand planning, order anticipation, supplier relationship maintenance, return management, production. These processes are jointly driven by the operational teams (marketing/sales, logistics, production, procurement) of the different organizations that make up an ecosystem that works and collaborates in the network (suppliers, subcontractors, industrial, logistic providers, distributors) participating in the production and delivery of an offer of associated products/services whose objective is to satisfy the end customer.

Given its strategic issues and its scope, various disciplines of the above-mentioned functions have appropriated, while remaining fractioned and decentralized, the issues related to the emergence of a SCM and contributed to the structure of a field of research with the same representation of the SCMs. (Livolsi, 2009). This, based on the management of information, physical and financial flows, allows us to identify their components (organisms, processes, functions, actors), their interactions or interfaces, as well as those with their environment. Multidimensional and multi-stakeholder decision-making processes have led researchers to focus on the sharing of information and the processing of data exchanged and thus the information dimension of SCs based on a systemic approach. While, in the early 2000s, a paradigm shift took place in the Anglo-Saxon region, of "complex adaptive systems" (Choi et al., 2001) and in France, of the "complicated thinking" (Bruyère and Fabbe-Costes, 2011), this area remains strongly influenced by this functional vision of the SCs. (Burgess et al., 2006).

Understanding SCs from the perspective of complex systems and their general properties can be beneficial for explaining even complex SCs, whereby the perspective explains why SCs behave as they do in reality. Complex systems are open systems that operate under quasi-equilibrium conditions (Gell-Mann, 1995), whereas their states are determined by the values of

their inputs and outputs (Cilliers, 2005), resulting from the interactions of interconnected subsystems, with interactions being highly sensitive to the history of the subsystems and to their current context (McMillan, 2006; Hogue and Lord, 2007; Hoogeboom and Wilderom, 2020; Asthana et al., 2020). In addition, complex systems possess the capacity to respond to their environments in more than one way (Allen and Strathern, 2003). A complex systems perspective can also facilitate the understanding of how SCs are more effectively managed, i.e., directed, assessed, improved and transformed toward desired outcomes. This perspective achieves this understanding by challenging simplistic, superficial, and positivistic approaches, techniques, assumptions or mindsets in SCM – some examples include objective reality, deliberate design, reductionism, uniformity, determinism, stability, rationality, equilibrium, linearity, symmetry, order, hierarchy, centralization and controllability.

3. The systemic approach in the supply chain

Managing relationships within a network of partners in a supply chain has become a significant factor in gaining a competitive advantage in numerous sectors (Dyer, 2000). For virtual enterprises adopting a process-based approach, also known as a cross-functional/systemic approach, the key is the pursuit of real integration between the customer and its suppliers, aiming to achieve market-imposed objectives of reducing development lead times and enhancing logistical responsiveness to customer demand.

The concepts related to the Supply Chain disrupt the traditional organizational silos of most companies and bring about a new vision: cross-functionality, comprehensiveness, complexity, and flow – essentially a systemic approach to organizations. "Transversal Supply Chain is a series of organizations directly interconnected by one or more types of flows: product, service, financial, and information flows; both upstream and downstream, from a primary source to a final customer" (Mentzer et al., 2001). Our systemic approach allows us to consider all stakeholders involved in global value chains, from needs to satisfaction.

Thus, a premium has been placed on collaboration (Lehoux, D'Amours, and Langevin, 2014) as a key source of competitive advantages. This holistic or systemic approach to SCM has been shown to outperform the traditional reductionist alternative, the overall strategy is obtained as a sum of individual strategies (e.g., Disney and Towill, 2003; Kollberg, Dahlgaard, and Brehmer, 2006; Costas et al., 2015). However, although academics and practitioners widely accept the improvement in operational and (consequently) financial terms, supply chain collaboration faces high hurdles, such as the menace of opportunistic behaviors (Simatupang, Wright, and Sridharan, 2004), which stresses the importance of defining an appropriate framework.

It should highlight that the recent economic crisis has been understood as a consequence of globalization still being unable to develop systemic dynamic properties to deal with a growing variety of requirements (Schweitzer et al., 2009). This fact has increased the interest for new approaches to business based on holistic paradigms. Hence, supply chains must be underscored as boiling areas for innovation.

Tom Mentzer's work (2016) has highlighted the need for inter-functional coordination within traditional business functions and inter-organizational coordination throughout the chain. For the customer, it involves identifying relationships requiring strong integration and the relevant means to manage it. For the supplier, it involves understanding and anticipating the customer's expectations to define a response that provides a real competitive advantage.

The nature of the supplier network (expertise, nature of established relationships, client portfolio, etc.), as well as the identification of the firm's key competencies, will influence architecture choices, and conversely, architecture choices will shape the supply chain. The

challenge for development teams is to define module perimeters limiting their interdependence, thus being able to revert to a cross-functional logic involving various company processes, while emphasizing coordination, collaboration, trust, and cooperation among different intra- and inter-organizational departments.

4. Neo Institutional Theory: A processual approach to change

Since the work of the pioneers Meyer and Rowan (1977) and Di Maggio and Powell (1983) the so-called neo-institutional theories have not ceased to crystallize the attention of researchers in management sciences in particular who have seen in these theories a new framework of analysis allowing the understanding of several problems arising from the new configurations of economic exchanges at the time of globalization.

These theories allow in fact to study complex organizational systems such as the SCM system which is the subject of our concern in this work where the issues of collaboration, significance, domination, and legitimacy, among other concepts with various interlinkages, are embedded in broader social and institutional contexts.

In order to understand the firm as an open, finalized, organized, and controlled system, it is essential to review the main characteristics of the systemic approach as well as the key elements that make up the system.

Of all the existing definitions, the one proposed by Joël de Rosnay in the *Macroscopic*, published in 1975, is the most well-known. "The system is a set of elements in dynamic interaction, organized according to a purpose." The systemic approach corresponds to the approach of an object of study seen as a system allowing a comprehensive perception of its functioning in different aspects. It helps to understand the rules of operation of the system and to develop the principles of efficiency.

The overall interest of this neo-institutional approach lies in the fact that it provides a conceptual framework capable of showing and understanding some organizational considerations that old currents of thought such as traditional positivism based on the work of Watts & Zimmermann (1978) were unable to clarify. Thus, this new course of thought has been gradually imposed by the work of researchers in management sciences in particular, who have devoted a special attention to the notion of institution, while trying to detect different aspects relating to organizational considerations, but also those that are incumbent on the practices of the actors as well as the relationships that unite, in different ways, the organizations among themselves. Indeed, many management sciences researchers have looked at what is commonly accepted to be called neo-institutional theories. These are first of all the precursors Di Maggio and Powell (1983) as well as Meyer and Rowan (1977) who have devoted important work to these theories by demonstrating the crucial role they are called to play within management sciences. The reason for these newly embodied theories in the academic work on management facts is to understand management tools as a global process of legitimation, predominance and significance. These three dimensions give the organization the image of a full-fledged social body. Thus, as DiMaggio and Powell (1991) specify a few years later, the reason for the TNI has enriched itself with other parameters that, in addition to efficiency, order the different organizational behaviors, while legitimizing them. All the researchers agree that it is the economic turmoil, the turbulence of the markets and the depletion of resources that have led companies to revise their principles and modalities of operation in such a way as to put themselves on the tracks of performance, including by adopting all the appropriate tools such as the search for efficiency and quality.

5. Integration of social dimensions into SCM

The transactional, digital physical dimensions of technology now take an important place in SCM research which gives it an innovative character allowing the optimization and improvement of organizational processes. The current technological transformation about supply chain efficiency 4.0 Frederico et al. (2019).

In doing so, even if the consequences of this technological transformation are challenging, the social and human dimensions of SCs are still the subject of less attention. As mentioned earlier, the barriers inherent in the perspectives developed in the discipline have left little room for deeper reflection on social dynamics.

In the area of supply chain, many studies have demonstrated that the quality of relationships that connect customers with their suppliers, helps to consolidate the implementation of technological innovations. This is the case of Primo and Amundson (2002) who have confirmed the existence of positive relations on this subject. Thus, the integration of the social dimension at the level of supply chains embedded in a complex system is one of the most important concepts of organizational management. The study of the social dimension has been the subject of extensive development by researchers who have devoted significant work to, clarify the ends and ends, but also to show to what extent this integration of collaborative practices contributes to enhancing the effectiveness, performance, transparency, etc. of the SCM as a efficient organizational model and modern managerial practice relying, inter alia, on new technologies for better performance. (Hertz and Alfredsson, 2003; Vickery and al. 2003; Dröge et al. 2004; Gimenez and Ventura, 2005; Swink and al., 2007; Rosenzweig, 2009; Jayaram and Tan, 2010; Balambo, and Livolsi, 2010, Balambooi and Hussaini, 2011; etc.)

Integrating the social dimension to master the management of supply chains implies the consolidation of cooperation and trust relations between the various partners, without forgetting the design and implementation of information systems that ensure the speed and efficiency of exchanges.

6. The typology of collaborative relationships in Supply Chain:

Given the intensity and multiplicity of links and exchanges that unite organizations with each other, researchers have devoted numerous works to understanding the ins and outs of these links as well as their typologies and their impact. (Especially positive).

Along the same lines, Anderson and Narus, (1991) use the pair transactional relationships and collaborative relationships to distinguish between what is of the order of the “material” transaction and what is of the order of the link relational.

Analyzing the factors that come into play in the more or less intense and continuous deployment of relationships between partners, other authors distinguish between two families of factors: the context within which the relationship takes place and the nature of the behaviors that players.

The context in which the relationships between partners unfold is one of the factors that has attracted the most attention from researchers who, like Ganesan (1993) concluded that this factor is important because it is the one that allows one to understand the recurrence and age of exchanges, the degree of mutual interdependence between the actors and, therefore, the greater or lesser proximity that unites them. Thus, Dwyer et al. (1987) distinguish two types of exchanges: a transactional exchange which takes the form of a specific transaction concerning a product or a service, and a relational exchange which corresponds, for its part, to a specific behavior linked to the nature and to the history of the relationships which unite the two partners.

6.1. Interdependence:

Interdependence is one of the manifestations of the social dimensions as defined by Dwyer et al. (1987) and discussed above. This interdependence confirms, in fact, the reciprocity of the bond between partners who are mutually dependent on each other. It should be noted that the position of these authors on this subject is part of the extension of the study made a few years earlier by Macneil, (1980) and which has made it possible to highlight the fact that the relationship interdependence is gradually establishing in favour of recursive interactions carried out by the partners. In this regard, the author emphasizes that the degree of relationship interdependence is measured by the nature of the assets (relational or transactional) mobilized by the partners respectively, as well as other elements relating to the overall environment in which the relationship develops. It is in this same order of ideas that authors such as Joshi and Stump (1999) specify that the mobilization of assets such as the deployment of technological tools or training actions are likely to strengthen the relationship interdependence and, therefore, to consolidate the relationship between the partners as a whole.

Kim (1999) refers to the actual or expected contributions of one or both partners, having in some way favoured the actions and performance of the latter, as a factor that promotes the consolidation of the relationship interdependence. Thus, this new configuration of the inter-enterprise relationship will crystallize the attention of the community of researchers who have devoted to it various work that falls within the framework of the neo-institutional approach or look at the analysis of transactional vs relational and social dimensions (Lecler, 1993). However, Tyndall et al. (1998)'s position on this issue is worth emphasising, given that these authors believe that the relationships that bind together, in the context of the Supply Chain, are so complex that these approaches may be inoperable, especially when faced with so-called procedural interdependence. In this case, Tyndall et al. (1998) suggest a distinction between four forms of relationships: commercial transactions; cooperation; coordination; and collaboration.

6.2. Collaboration

Collaboration, as a practice that indicates a high degree of cooperation between two or more partners within the supply chain, has received particular attention from researchers who have devoted many works to it (Barrat and Oliveira, 2001; Mc Carthy and Golicic, 2002; Bowersox et al. 2003; Barrat, 2004; Becker, Verdjuin and Kumar, 2004; Simatupang and Sridharan, 2005; Holweg et al., 2005; Min et al, 2005). This is an important notion in management sciences and in relation to organizational behavior. Collaboration generally refers to the coordinated action by two or more partner companies, manifested in particular by significant and regular exchanges of information relating to the activity that unites them, and in the perspective of sharing responsibility for its design, planning, management, implementation, and evaluation (Min et al., 2005).

For example, in the area of the Supply Chain, we talk about collaboration when two or more partners in the chain engage, in a regular and structured way, in an exchange of physical and information flows, and this in the perspective of ensuring the best possible optimization of the logistics process as a whole, from the actor who is situated at the top, to the beneficiary who is at the bottom.

This exchange of flows is what gives the supply chain real and effective consistency, while enabling the actors involved in the collaboration to their respective goals and performance. It is therefore clear that we cannot talk about collaboration without its exchanges. It is also clear that the quality of collaboration is largely dependent on the intensity and quality of the exchanges. Because it is these exchanges that, while giving the collaboration a real consistency, enable it to be effective and to the objectives for which it was implemented. Thus, collaboration and exchange of information and physical flows are intrinsically and

consubstantially linked. Stank et al., 2001 highlighted, for example, that collaboration encompasses many practices such as the sharing of strictly operational information necessary for daily monitoring, as well as those of a strategic nature and relating to future projects or any other consideration of equal importance. The same authors also specify that the collaboration could take the form of information integration, or financial links that enable the entities concerned to benefit each other from their respective financial performance. On the contrary, intense collaboration between partners, researchers such as Hertz and Alfredsson (2003) or Hofenk et al. (2011), are likely to promote the performance of the supply chain, while promoting that of all the partners who have developed various devices to gains of different nature, as well as sophisticated logistics solutions that none of them could have found or implemented alone. (Selviaridis et Spring, 2007).

6.3.Coordination

Strictly linguistically, the notion of coordination corresponds to the action of disposing of several elements to be able to obtain a result. When it comes to the acceptance of the term coordination in the organizational field and in particular concerning industrial processes, most authors refer to the idea of an arrangement of elements or parts to result in a coherent whole. For example, in the area concerned by us, the notion of coordination corresponds to a series of actions carried out, by mutual agreement, by several partners (at least two) who formally agree to cooperate, referring to a common framework that is supposed to ensure the conformity of the actions undertaken by one and the other, with the objectives of both parties. It is precisely given to this synchronization of the objectives of several partners that coordination has been the subject of particular attention in the management sciences, a specially in inter-organizational relations. Related to this fact, Arshinder et al. (2008) believes that coordination refers to how partners have to manage information flows in both directions (entry and exit), in order to ensure optimal coherence of their interdependent activities. This is where coordination is of undeniable strategic importance. This same general idea is found in many authors who have been interested in coordination within organizations and emphasize, for most of them, the idea of working intelligently within the group or network concerned.

6.4.Cooperation

While coordination involves partner agreement on the distribution of tasks to be performed, allocation of resources and tools to mobilize cooperation is carried out through coordinated action to solve problems. This is what authors such as Kim (1999); Chen and Paulraj (2004) or Wiertz et al. (2004) allude to when talking about cooperative behavior within the supply chain. Indeed, many authors have demonstrated that variables such as engagement and cooperation influence each other, thereby contributing to the consolidation of the relationship between partners within the supply chain. This is the case of Dwyer et al. (1987), de Fontenot and Wilson (1997) who confirm the existence of a positive correlation between commitment and cooperation. For their part, Anderson and Narus (1990) show that cooperation is strengthened by the communication ties that the partners agree to establish among themselves. What is noteworthy is that supply chain management has mobilized for more than two decades a lot of work on the different contributions of integration not only in terms of incorporating the different upstream and downstream logistics operations but also the consolidation of cooperative relations. (Cooper et Ellram, 1993 ; Giunipero et Brand, 1996 ; Higginson et Alam, 1997 ; Alber et Walker, 1997 ; Harrington, 1999).

For their part, Lee and Whang (2001) see in the integration of collaborative practices at the level of supply chains a new management philosophy whose main characteristic is to advocate and promote cooperation and coordination between all the actors in the chain. The same idea that the inter-organizational steering of supply chains through social dimensions

is mainly implemented through full-fledged cooperation and the weaving of relationships capable of promoting the co-building of performance for all the partners is found in Rodrigues et al. (2004), for their part, believe that the adoption of a commonly shared vision and the pursuit of convergent and complementary strategic objectives is what allows the partners of the SCM to effectively realize the relationship integration.

6.5.Commitment

Commitment is one of the concepts that has received the most attention from researchers in the context of studies on the social nature of inter-organizational relations. It generally corresponds in the work of these researchers to a behavior of loyalty which consists of maintaining a partnership relationship despite the possible sacrifices that this implies, and this as opposed to opportunism which consists of breaking the relationship as soon as an advantage whatever presents itself outside of the relationship.

Morgan and Hunt (1994) are among many researchers whose work has demonstrated that commitment is a chain partner's predisposition to agree to maintain a relationship. Gundlach et al. (1995) follow this same definition by specifying that commitment is also assessed by the greater or lesser willingness to break off the relationship. While sharing the point of view of these authors, Morgan and Hunt (1994) emphasize that commitment is measured above all by the predisposition of partners to invest in a long-term inter-organizational relationship and to make it a real strategic choice. Lefaix-Durand and al (2006) summarize these correlations by postulating that: « the more the situation in which the exchange occurs is characterized by a long-term orientation, great proximity, a significant frequency of exchanges and a strong interdependence of the actors, the more behaviors in the exchange are characterized by high levels of commitment, cooperation, communication and trust »

6.6.Partnership

It should be noted that the partnership appears to be the result of highly collaborative behavior, in which communication and exchange of information have been active.

Several authors involved in supply chain management define partnership as emanating from a voluntary desire on the part of logistics chain partners to establish structures, management modalities and procedures that promote the achievement of the respective objectives of all the actors in the chain, giving priority to collaborative practices and banning practices of an opportunistic nature. (Stank et al. 2001 ; Rodrigues et al. 2004 ; Panayides et So, 2005 ; Hofenk et al. 2011 ; etc.).

Indeed, many researchers have demonstrated the correlations between partnership and the consolidation of collaborative practices and different exchanges between the Supply Chain partners, thus enabling to concrete relational integration that, moreover, is based on the sharing of some cultural values, more of course, of the same project and similar and/or concordant objectives. (Makukha et Gray, 2004). In other words, a partnership relationship is a kind of general framework within which organizational relationships made of intensive communication, regular and structured exchange of information, and collaboration, are deployed daily with the aim, on the one hand, to the objectives of each of the partners, and on the other, to give an effective existence to the Supply Chain as a networked system.

7. Conclusion

After concluding this literature review of the importance of the notion of inter-organizational relationships in today's economic world, we can conclude that we cannot today imagine the possibility for a company, however powerful it may be, to operate and thrive outside a network and to deny relationships that unite it with a set of partners. It is these relationships that ensure, in different ways, the value creation that any business pursues.

However, as some studies indicate, inter-agency relationships are not merely beneficial, and many problems and risks are to be feared because of the complexity of systems, often embedded in which they interact at the supply chain level, such as conflicts or vulnerabilities that might arise from these relationships. Indeed, authors such as Svensson (2004) refer to the risk of fragility, but also of dependency perceived by certain partners in the chain and which may be, in the eyes of this author, the result of problems related to the process of integration between partners or a bondage to technologies.

For their part, Bowersox et al. (2000) refer to other reasons that may cause vulnerabilities for some partners, such as concerns about the globalized organization of the economy or, in some cases, the obligation to share investment costs allocated to the establishment of collaborative relationships.

The mobilization of a literature review on the steering of supply chains by collaborative practices has enabled us to highlight the social dimensions of strategic actors as well as the complexity to which organizations are subjected in terms of complexity. Establishing a collaborative process between two or more partners is not sufficient to guarantee the achievement of the desired objectives. To do this, many authors have stressed that several basic rules must be observed. The precise distribution of tasks to be performed, complex objectives, and responsibilities to be assumed.

In addition to these considerations that ensure the effectiveness of coordination, Buzon (2007) notes that the integration of the technological dimension related to the sharing of necessary information (which may sometimes be of a confidential nature), as well as the establishment of adequate resources and tools, are also conditions that may promote the successful coordination and, hence, the achievement of the mutual goals of the partners.

However, as some studies indicate, inter-agency relationships are not merely beneficial and there are many problems and risks to be feared, such as conflicts or vulnerabilities that might arise from these relationships.

Indeed, authors such as Svensson (2004) mention the risk of vulnerabilities. For their part, Bowersox et al. (2000) refer to other reasons that may cause vulnerabilities for some partners, such as concerns about the globalized organization of the economy or, in some cases, the obligation to share investment costs allocated to the establishment of inter-agency relationships. Nor are the potential data security risks that partners are required to constantly exchange through IT channels alien to these vulnerabilities, which may be more or less significant for some partners. However, this aspect deserves to be deepened and supplemented by an empirical study that could be the subject of our next article.

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